

AMERICAN BEE JOURNAL



GEORGE W. YORK,
Editor

CHICAGO, ILL., JULY 25, 1901.

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WEEKLY



MR. R. WILKIN.—See page 472.

THE AMERICAN BEE JOURNAL

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To promote and protect the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

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A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.



NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Weekly Budget.

MR. F. B. SIMPSON, whose article on in-breeding appeared in last week's number of this journal, desires to make the following correction:

I wish here to correct the error I made in my article on in-breeding, on page 452. When I wrote, "My idea that the best bee is the best regardless of locality," I had in mind all the limitations mentioned in the 4th full paragraph in the 2d column on page 454, but failed to put them on paper, as they should have been if again mentioned, for I am a long way from believing the way the last sentence was printed.

F. B. SIMPSON.

EDITOR E. R. ROOT passed through Chicago on his homeward journey Monday evening, July 15, stopping in the city only between trains. He had covered about 6000 miles, making some 45 stops, and was feeling well, having gained several pounds in avoirdupois. The Texas "bee-keepers' paradise," mentioned by him in a recent editorial item in his paper, is already greatly overstocked with bees and bee-keepers, so no one need get ready to move there right away. In Colorado and Utah, however, there are unoccupied locations that are excellent for bee-keeping.

LONG-TONGUED HONEY-BEES.—I am making a study of the length of tongue in the honey-bee, and its relation to honey-production. I shall be glad to have all readers of the American Bee Journal, who are interested in the subject, send me bees from their best and their poorest colonies for honey-production. Send not less than 10 or 15 alive in a queen-cage. Do not put bees from different colonies in the same cage, and do not send bees from colonies where a new queen has been introduced this season, unless within two weeks, as it will be best to have all the bees in a cage from the same queen. If any have bees from queens that have been recommended to produce specially long-tongued stock, I shall be glad to receive some of the bees and measure their tongues. Send full information with each lot of bees. I shall be glad if some can send specimens of the German or black bee, also Carniolans, Cyprians, and Syrians. Address, C. P. GILLETTE, Experiment Station, Ft. Collins, Colo.

MR. S. W. HALL, of Wyoming, has been offering Editor Hutchinson, of the Bee-Keepers' Review, some suggestions. One of them is referred to in the following paragraph:

"Boil it Down," is what Mr. S. W. Hall, of Wyoming, would be pleased to have us editors and correspondents do. He says that he takes the bee-journals to get new ideas, but he is obliged to scratch over so much chaff for a few grains of common-sense that he is sometimes tempted to forego the reading of all of the journals until they learn to boil it down. Long articles are sometimes necessary and valuable; but, if I understand the spirit of Mr. Hall's criticism, it is not to these that he objects so much as to giving space to articles that are of little or no help to real, practical honey-producers.

Mr. Hall should read the American Bee Journal. If too busy to do that he is likely too busy to waste his time keeping bees. He reminds us of many a beginner in bee-keeping who thinks he can't afford to spend one dollar for a good bee-book and another dollar for a good bee-paper. A man who can't afford to start right in any business (especially when

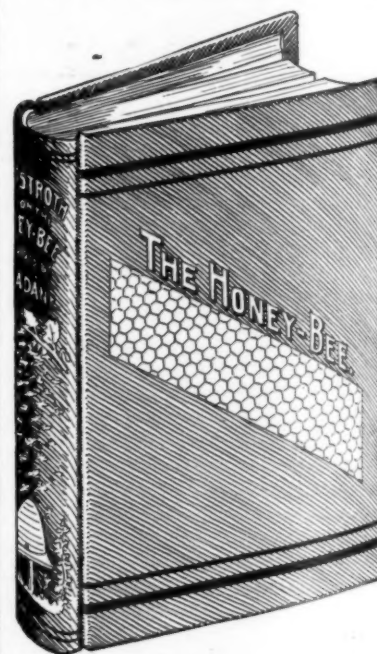
it costs so little) can't afford to start in it at all. And yet, such a man usually thinks he can afford to waste his neighbor bee-keeper's time by asking a hundred questions that are answered by the book and paper.

Of course, in a measure, Mr. Hall is correct, and for that reason we have our department of "Beedom Boiled Down," so that bee-keepers really need read only the American Bee Journal, and thus save time and money, and also get practically all the latest and best ideas on the subject of bee-keeping.

Langstroth on "The Honey-Bee"

Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the Ameri-



can Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for \$1.25, or club it with the American Bee Journal for one year—both for \$1.75; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with \$3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.

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AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

THE OLDEST BEE-PAPER IN AMERICA

41st YEAR.

CHICAGO, ILL., JULY 25, 1901.

No. 30.

* Editorial. *

One of a Thousand.—Are you one of a thousand members that the National Bee-Keepers' Association ought to have before the convention to be held in Buffalo, in September? Last week we reported the names of four persons who had sent us their membership dues. This week we record the following:

JOHN BALUSS.

JOHN S. DOWDY.

New names will have to be sent in more rapidly than during the past two weeks if we are going to secure the necessary 200 among the readers of the American Bee Journal. That was what we thought could easily be done. And it can be—if only 200 among all the thousands who are not yet members of the Association would simply send in the one dollar each.

Of course, it is not necessary to send your dollars to us—send them direct to General Manager Eugene Secor, Forest City, Iowa, if you prefer. But we can publish the names of only those who send to us. We will then forward the money to Mr. Secor.

Now, can't we have a long list of new names next week?

Grading Honey.—Mr. D. W. Working has an article on this very important subject in this number of the American Bee Journal. Every bee-keeper ought to read it, and then heed it. We have handled enough honey to know that most bee-keepers know very little about the grading business. Of course, each knows that no other bee-keeper ever produced as fine honey in every way as his! And no one grades as honestly as does he! It's always the "other fellow" who puts the finest and whitest sections of honey in the front row, next to the glass, and then fills in back of them with "any old thing!"

One needs only to see the promiscuous lots of honey that are received by a honey-dealer, to be convinced that on the subject of grading there is much to be learned by most bee-keepers. And uniformity of grading—well, you might almost as well talk of controlling breeding so that all calves or colts will be of the same size and color!

But it will pay to continue to call attention to this subject that really does mean so much to honey-producers.

Read Mr. Working's article, and then see if you can't hereafter do better work along the line of grading honey.

Bees Superseding Queens.—G. M. Doolittle says in the American Bee-Keeper that fully three-fourths of his queens superseded by the bees are so superseded during the three weeks immediately following the linden flow. So any queen that he wishes to replace at that time is disposed of, and a ripe cell given a day later, unless a cell-protector is used, in which case the cell is given at the time of removing the queen. A plan not generally known he further gives:

Another plan which I have often used since my apiary became very much improved beyond what it formerly was, is to rear a lot of cells from my best queen at the time given above, and 24 to 48 hours before they are booked to mature, give one to each colony having a queen more than one year old, using a cell-protector for each one, and placing this protected cell in one of the sections on the hive, or anywhere I best can where the bees can cluster about it, without hunting out the old queen at all; when, if the bees have any notion to supersede their queen, they will accept of this young one and destroy the old queen. If they destroy the young queen I allow the old one to remain, thinking that the bees know what is right, and in 19 cases out of 20 where the bees decide on keeping the old queen, I find she proves *par excellence* till after the honey-flow of the next year is over. This is something which does not cost much labor, and which I practice often to my satisfaction.

In-Breeding is generally supposed to be a thing that should in all cases be avoided, and bringing evil and only evil in its train. Those who are well-informed tell us that some of the best results in breeding have been obtained through the very closest breeding, and this has been emphasized so strongly that some might be led to think that no care whatever is needed to avoid in-breeding. A very wide gulf lies between the two teachings. On one side lies the teaching: in-breeding must never be allowed. On the other side lies the teaching: pains must be taken to practice in-breeding if the best results are to be obtained. The truth in such cases is generally to be found in middle ground. In this case the middle ground would be very welcome to the lazy breeder, who would interpret it as being: take no pains to avoid in-breeding, and take no pains to practice it, but let nature take its own course. In this case certainly the middle ground so interpreted is not a safe ground.

We are told that in-breeding is not a bad thing *per se*. Perhaps. How can in-breeding be a bad thing when such grand results have been obtained through its practice? But were the results obtained because of in-breeding or in spite of it? Darwin says there is no mysterious evil in the mere fact of the nearest relatives breeding together, but the evil follows from the circumstances of near relatives generally possessing a closely similar constitution,

and that however the fact be explained it seems a fact that for the most vigorous progeny there must be a certain differentiation between sire and dam. That sounds like saying there is no evil in in-breeding *per se*, but it comes perilously near it if attendant circumstances are so commonly such that evil results. It would be unwise to dogmatize with none too much knowledge on the subject, but there may be no harm in asking a few questions:

Did those breeders who obtained such good results from in-breeding breed from near relatives because they were near relatives, or because they possessed, in common, qualities desired to be perpetuated? Would a father ever have been bred to a daughter as sire and dam if another than the father could have been obtained possessing the same qualities as the father without at the same time being nearly related to the daughter? Is it not the safe thing for those who do not take great and special care, that they shall take all the pains possible to avoid in-breeding? Is it not well that more should be known about the laws of breeding, so that a goodly number of the craft could be engaged in an intelligent attempt to improve our bees?

The Saw Palmetto is an important honey-plant. That same remark about white clover would perhaps elicit a smile of pity, for every one is supposed to know white clover honey, yet saw palmetto is to the Florida bee-keeper, the editor of the American Bee-Keeper says, what white clover is to the Northern producer of honey. "Hundreds of thousands of acres of Florida sand are covered with a scrub growth of it, while in moist and richer localities it grows in impenetrable jungles, and is one of the most beautiful of our sub-tropical palms," so says Mr. Hill.

In the same journal, W. S. Hart says it is a tree whose trunk may lie under the surface of the ground or upon it, or it may rise 10 or 12 feet high in the air. It is one of the cheapest and best sources of tannic acid for tanning leather. The pinnated leaf is used to make paper, especially of finest quality, and capable of holding oil and other liquids. It also makes a very clean and springy filling for mattresses. The bloom is composed of small, cream-colored flowers on racemes from one to three feet long, and the honey is of a fine light-amber color, heavy in weight, and of good flavor. Another grade of honey is obtained by the bees from the juice which oozes through the skin of the berries, which are from the size of an olive to twice that, and seem to be a wholesome food for hogs, cattle, bears, and people.

Contributed Articles.

Grading Honey—Its Importance, Rules, Etc.

BY D. W. WORKING.

Secretary of the Colorado State Bee-Keepers' Association.

THE bee-keeper is a partner in a co-operative business; he furnishes the hive and its accessories and markets the honey and wax which the bees produce. But he does more. Between the work of preparing the hive for the bees, and marketing the product of their labor, the bee-master has other work to do. He is more than a partner in a co-operative establishment—he is both manager and joint worker, and on the wisdom and skill with which he works and manages depend in a large measure the success of the business venture.

The bee produces the honey. But will it make straight combs, even, white, and well-capped, if hive and sections are not properly prepared for its use, and if they are not properly cared for during that use? And if all the preliminary work is well done, will the product be ready for an exacting market without additional work and care? The fruit-grower picks his berries and his apples when they are in the best condition for the trade; he sorts them carefully and puts them up in attractive packages in order to command the best prices the market affords. Skill in raising, experience in handling, wisdom and foresight in catering to a varying demand—these are the secret of his success.

The bee-keeper must do more than to induce his bees to put their product into clean sections; he must keep the sections clean and unbroken; he must meet the demands of the trade. To do this he must take the honey from the hive at the right time, must make each section as clean and inviting as possible, and then assemble the sections properly in attractive packages. People like what is good, and like it better if it looks good. What is clean suits them better if it looks clean. A stain on the outside of a section does not make the honey less sweet or less wholesome, but does make it less attractive to the buyer. The stain, therefore, must be removed before the section is offered for sale.

Uniformity counts; therefore the bee-keeper must make his packages uniform—in size, in shape, in color, in arrangement. A few leaking sections are too many; a single badly graded case may spoil the sale of a ton of honey. So the individual must be careful in grading, in handling, in packing, and in selling his products. But this is not enough. The market is too big for one man to supply. Honey is bought and sold by the car-load—even by the train-load—and the buyer is wise enough to insist on uniformity of grading in the whole lot. The packages must be uniform or he will complain; the packing must be uniform or he will find fault; the honey itself must be uniform or he will not pay the highest price for it. He is a kicker—the buyer is—and he ought to be! So the uniformity of grading and packing which is necessary to the individual is necessary to all who help supply the market.

The Colorado State Bee-Keepers' Association has undertaken to provide a system of grading rules that will make Colorado honey as famous for evenness and honesty of classification as it is for quality. It is hoped and intended that "No. 1 Colorado Honey" shall have a meaning as definite and precise as any other trade name may boast. To this end, every member of the Association is furnished a copy of the rules and recommendations, and urged to follow them as faithfully as if he were to be paid liberally for doing so in addition to winning an honorable name for himself and his State. Indeed, the man who follows the rules carefully and wisely will be paid for his faithfulness in the higher price he is sure to get for his products.

The rules are not supposed to be perfect; but they are believed to be better than those of last year. I may venture, myself, to add a suggestion. In case of doubt in classifying, give the lower grade the benefit.

The rules and recommendations of the Colorado State Bee-Keepers' Association are as follows:

COMB-HONEY RULES.

No. 1.—Sections to be well filled and capped, honey white or slightly amber, comb white and not projecting beyond the wood, wood to be well cleaned; cases of separated honey to AVERAGE 31 pounds net per case of 24 sections, with a minimum weight of not less than 20 pounds for any single case; cases of half-separated honey to AVERAGE not less than 21½ pounds net per case of 24 sections, with a minimum weight of 20½ pounds for any single case; cases of unseparated honey to AVERAGE not less than 22½ pounds net per case of 24 sections, with a minimum weight of 21½ pounds for any single case.

No. 2.—Includes all amber honey of a pronounced tinge, and all white and amber honey not included in No. 1; to be fairly well sealed, uncapped cells not to exceed fifty in number exclusive of the outside row, wood to be well cleaned; cases of separated honey to AVERAGE not less than 18 pounds net per case of 24 sections.

EXTRACTED-HONEY RULES.

Extracted honey shall be classified as white and amber, shall weigh 12 pounds per gallon, shall be perfectly free from particles of wax, and shall always be marketed in new cans. All rendered honey, whether obtained by solar heat or otherwise, shall be classed as "strained" honey and not as "extracted."

RECOMMENDATIONS.

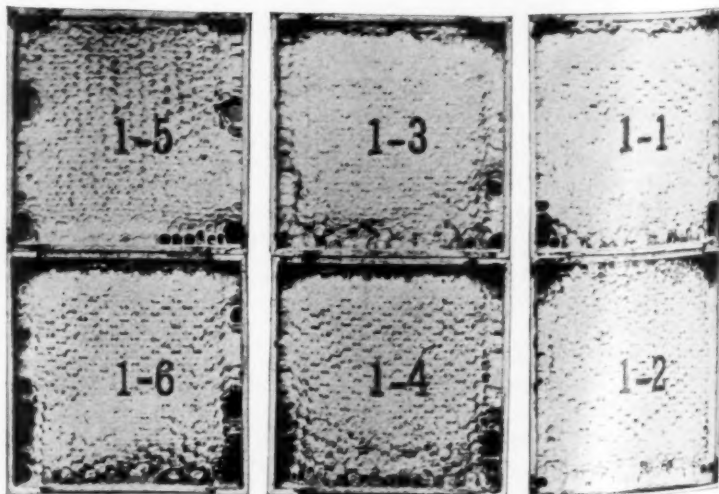
It is recommended to sell all cull honey around home as much as possible; to grade only in daylight, near a window; to use the standard 4¼x4¼x1½ inch section and the 24-pound double-tier shipping-case, in order to have uniformity in loading cars; to stamp all cases of No. 1 honey with the owner's name above the handholes; to mark all cases of No. 2 honey with two dashes in the handholes at each end of the case, and with no other marks whatsoever; to use no second-hand cases for No. 1 and No. 2 honey; to pack all sections with paper below and above, and in double-tier cases to put a sheet of paper between the tiers; to store comb honey in a warm, dry place, protected from flies and dust; and to haul carefully, well protected from dust and rain.



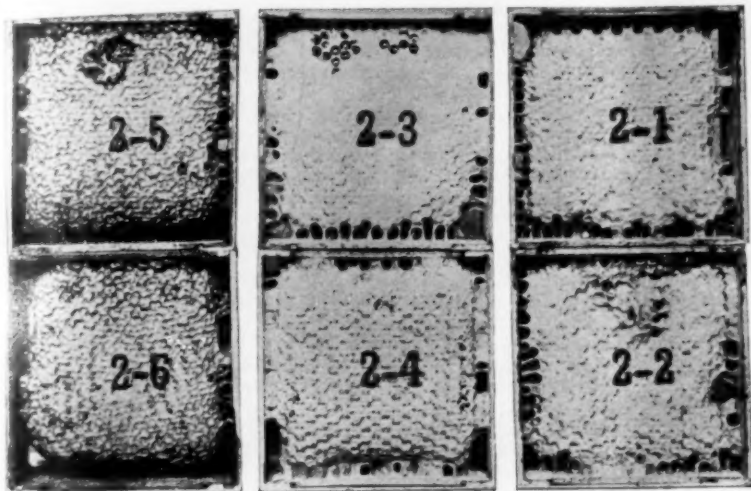
Do Bees Spread Pear-Blight?—The California Bee and Fruit Case.

BY E. R. ROOT.

TROUBLE has been brewing for some months between the fruit-men on one side and the bee-men on the other at Hanford, in the San Joaquin Valley, Calif. On the part of the first-named, the contention was that the bees, the property of the other parties, were the principal means of spreading the pear-blight, which had been working such awful havoc among the pear orchards in the vicinity mentioned. The bee-men, on the other hand, took the ground that their stock were not carrying the pear-blight; and, even assuming that they might do so, averred that other insects, and birds, as well as the wind, might and could do all the mischief laid to the door of the bees, and that, therefore, the removal of the insects under the direct control of man would not afford the relief sought. The contention waxed warm. Each side called special meetings to discuss the matter. Bitter words as well as threats were used. Some of the more rabid of the fruit-men proposed



No. 1 HONEY.



No. 2 HONEY.

to use poison to exterminate the bees in case they were not speedily removed by their owners. This only tended to aggravate matters. The bee-men retorted that, if any one were foolish enough to resort to such a procedure, not only killing the bees but endangering the lives of human beings, they would meet them on the issue half way; that they had, as backing, the National Bee-Keepers' Association, which had hundreds of dollars to its credit, had fought many cases in court, and had always been successful; that, moreover, it had decisions already on the question of poisoning bees, and that the fruit-men "could drive ahead" if they wished to. The latter maintained that they "had looked up the law," and that they knew what they were about.

It appears that those who indulged the most freely in this war of words were not those who had the largest interests at stake, either in the bees or in the pears; that the large pear-growers as well as the largest bee-keepers were men who indulged in no threats, but who believed that a compromise might be effected between neighbors who were men of fairness as well as men who are willing to listen to reason, and so the sequel proved.

The president of the National Bee-Keepers' Association was asked by resident members to make a visit to the scene of the impending trouble; investigate, and take such action as might, after a conference, seem most advisable. Accordingly, on the 18th of June, that officer appeared at Hanford, Calif., being dropped, as it were, into that "nest of hornets" by the redoubtable John H. Martin (Rambler), and J. C. McCubbin, who came with him officially and unofficially to see that no harm was done him; but, be it said, they deemed it advisable to go home that same day, although they did participate in one or two little "skirmishes" on the street. Unfortunately the Rambler didn't have along his invincible umbrella and stove-pipe hat; for with such offensive and defensive weapons he would surely have come off victorious. As it was, it was a "draw" and he departed with John C. under his arm.

It appears that the local members of the Association had made a great handle of the coming of the president of the National; of the strength of our organization, how it had never lost a case in court, and that it had secured valuable decisions from the high courts. But as he did not come at the time expected, and days went by, and still he did not come, the fruit-men began to think that this talk was all "bluff"; and when he did appear, there seemed to be a feeling on their part that he had come, not to bring peace, but war, and that an organization that would send a "walking delegate" clear from Ohio surely meant business. After a little sparring on both sides, a truce and a compromise began to be talked of. On our side was a special committee appointed by the Central California Bee-Keepers' Association, at its last meeting, to meet the representative of the National Bee-Keepers' Association; and on the other was N. W. Motheral, Horticultural Commissioner, of Hanford, Calif., who seemed to represent the fruit-men, but who some jokingly said was the mother of the whole trouble.

When both sides got together it was suggested by one

of the fruit-men that, as a compromise, the bees be moved from the vicinity of the pear-trees during the time they were in bloom, and that, after they were out of bloom, and when the alfalfa began to yield nectar, they be returned to take the heavy or main crop. This, it was thought, would give the bee men time to investigate for themselves, and if, after investigation, it was shown that the claims of the fruit-men were well-grounded, afford in the meantime the necessary relief. This was finally agreed to, although it would entail a big expense on the bee-men.

It may be wondered why the latter were willing to listen to a compromise at all. In the first place they desired to be fair; and, in the second place, the fruit-men had the testimony of Prof. M. B. Waite, Assistant Chief of the Division of Vegetable Physiology and Pathology at Washington, D. C. This official takes the position that bees do carry the microbes of pear-blight from flower to flower while the trees are in bloom. In this opinion he appears to be supported by Prof. N. B. Pierce, Pathologist of the Pacific Coast Laboratory, Santa Ana, Cal.

The following letter, directed to N. W. Motheral, Commissioner of Horticulture at Hanford, Calif., from Prof. Pierce, explains the position of the scientists, in a nutshell:

Mr. N. W. Motheral, Horticultural Commissioner, Hanford, Calif.—

Dear Sir:—In fulfillment of my former letter, and in reply to your request, I herewith give the main facts upon which are based the claim that bees take an active part in spreading the disease of trees variously known as pear-blight, twig-blight, fire-blight, etc.

1. Pear-blight is a bacterial disease which affects pear, apple, crab-apple, quince, and related trees. It is induced through the action of a specific micro-organism belonging to the bacteria, and known as *Bacillus amylovorus* (Burrill), de Toni.

These facts have been demonstrated by many scientific workers by careful inoculation, experiments conducted with pure cultures of the bacillus. The cause of the disease has therefore been well known for many years.

2. The identity of the blight of pear-trees in the Clow and Taylor orchards near Hanford (these particular orchards are cited only for the sake of accuracy, as there are many others affected) with true eastern pear-blight has been demonstrated at this laboratory. *Bacillus amylovorus* was isolated in pure culture by the plate process from blighted branches from Mr. Clow's trees, and a young and thrifty pear-tree was inoculated, and died to within a few inches of the ground of true pear-blight. A control tree treated the same way as the inoculated tree, except that the bacillus was not introduced, remained perfectly healthy.

Mr. M. B. Waite, Assistant Chief of this Division of the Department, has kindly supplied the following additional facts bearing on this matter:

3. "The occurrence of the blight on the blossoms in great quantities, and the great rapidity with which the disease spreads from flower to flower, indicates a normal and very effective method of distribution."

4. "The germs were found growing freely in the nectar of the blossoms."

5. "Bees were seen repeatedly visiting the infected flowers, and some were caught taking infected nectar, and, by means of plate cultures, the pear-blight germs were isolated from their mouth parts."

6. "By covering parts of the trees with sacks of various kinds of material, and then artificially infecting certain flowers on the tree, the blight was observed to spread very freely over the uninfected and uncovered blossoms, but was entirely absent in the blossoms covered by mosquito-netting."

7. "Blossoms were infected, and at once covered with sacks, and the blight, in such cases, was retained in the infected blossoms."

8. "Pear-blight germs died very soon after being dried up, and lived for only a brief period on exposure to weather conditions out of doors, hence they can not live in dust, and be blown around to any great extent by the wind."

9. "Pear-blight virus, particularly that which occurs on blossoms, is a very sticky substance, and is readily carried by insects, birds, or other animals, but can not be blown by the wind."

This brief presentation will, I believe, furnish your board with the main facts needed to show the connection existing between the visits of bees to pear-flowers and the spread of pear-blight.

Sincerely yours, NEWTON B. PIERCE.

April 23, 1901.

Pathologist in Charge.

Prof. Pierce happened to be in the city at the time, and in an interview which we had with him he gave utterance to substantially the statements as are given above. If anything, his verbal statement incriminating the bees was even stronger. So far as I could judge, he seemed to be a competent scientist, and a fair-minded gentleman; but, unconsciously, he is prejudiced, I think in favor of the pear-men, with whom he has come much in contact of late.

I asked him if it were not true that wild bees, insects and birds, over which man has no control, could do all the mischief ascribed to the bees. He admitted that this was possible, but not probable. Did he not think that bees were valuable as fertilizers of the blossoms, especially of those of the Bartlett pear? He thought they were. Well, did not this service of the bee, year in and year out, more than counterbalance the alleged mischief done by them in the occasional year when pear-blight was so prevalent? He could not say, although he was of the opinion that, by a certain alternation of varieties, the services of the bee might be dispensed with entirely; but of this he was not sure.

From Prof. Waite's statements it would appear (to express it in common parlance) that the bees have been caught "red-handed," bearing the marks of the alleged criminal act. If I understood Prof. Pierce, he had not found the bacteria of pear-blight on the tongues of the bees, nor had he himself seen the microbes in the nectar. If this be true, we have, as the only real incriminating chain of evidence, the statement of Prof. Waite. Without detracting in the least from the skill of the professor, it is proper to remark that even the best of scientific men make mistakes, and we, as bee-keepers can not accept the unsupported statement of Prof. Waite without further investigation by some of our men equally competent and fair.

This is a nice question, as a lawyer would say, and we need to go at it carefully and candidly to get at the truth, cut where it may.

There is some evidence that goes to show that Prof. Waite is mistaken. For instance, there are young pear-trees, acres and acres of them, *that have never been in bloom*, and yet these young trees are blighted to death. How in the name of reason did the bees carry blight to these trees when it is apparent that they never went near them? And then there are little shoots that have pushed up from the ground since the big trees were in flower, and yet *these shoots are blighted like the rest*. Assuming, for argument's sake, that bees may carry the blight on old trees, we must admit that there is some agency, possibly the wind, Prof. Waite to the contrary, that carries the destructive microbe to the young shoots and the young trees. There are some things that are not explained yet.

Again, I believe we have the right to insist, for the present, until we have more corroborative evidence, that wild bees, other insects, and birds, over which man has no control, may be able to spread the blight just as much as the bees under the control of man. For example, this illustration was used: If a barrel full of water has two plugs in it near the bottom, the larger plug, represented by the tame bees, and the other plug (the small one) by insects, birds, and wild bees, will not the small plug exhaust the barrel just as surely as the large one? If this be true the removal of the bees controlled by man would not bring the relief expected, by a long way.

In conclusion, let me say that I visited the worst-affected large pear-orchards in the vicinity of Hanford, Calif. The large pear-growers were fair, intelligent men. While they thought the bees were to blame, they also thought the pear-men had some responsibility in the matter.

I visited one orchard of 120 acres, and every tree was badly blighted, and no mistake; but in this orchard we found the badly-blighted little shoots I have referred to.—Gleanings in Bee-Culture.



California for Bees—Motherwort, Etc.

BY PROF. A. J. COOK.

PROF. C. P. GILLETTE, of Colorado, desires me to give the comparative merits of the different parts of California for bees. The southern portion of the State would be incomparably superior were it not for the too frequent drouths. When we have good years the crop is immense, and the honey—mostly sage—is very superior in color and flavor. But the dry seasons are too common. In the 7 years since I came here there have been but 3 excellent seasons, while two of the seasons were complete failures. It is possible that at some time in the future we may be prepared to water large sage areas, in winter, when there is too little rain, and when water can be had cheaply, and so remove this uncertainty. In such case Southern California would lead the world.

Central California—the great San Joaquin Valley—is becoming very noted as a locality for bees. The extensive

fields of alfalfa in Fresno, Tulare and Kings Counties, make the honey crop almost certain; and the quality of the alfalfa honey leaves nothing to be desired.

In Northern California there are always abundant rains, and in some sections, as along the Sacramento river, there are extensive areas of alfalfa. If the North had as fine honey-plants and in as rich profusion as the South, then Northern California would be at the head for honey-production.

Prof. Gillette asks especially about Sonoma County. If one is sure of honey-plants he may have no fear. It would be wise, if possible, to locate close by a large acreage of alfalfa, as then failure would be almost sure of elimination. There must be generous watering in winter to insure nectar-secretion. The owners of alfalfa will look to the watering, and so the honey crop will be assured.

MOTHERWORT AS A HONEY-PLANT.

Mr. Arthur A. Houser, of McDonough Co., Ill., sends a nice sample of this plant, of which he writes:

"I send you a flower which grows abundantly here. I haven't been able to find a botanist that can give me its name. Will you please name it through the American Bee Journal? The bees are on it from early morning till late at night. I feel sure it must be a very rich honey-plant. Do you not think I would better encourage its growth here, as it flourishes well with half a chance?"

This is one of the best mints of the East. It is the common motherwort—*Leonurus cardiaca*. It is illustrated in my "Bee-Keeper's Guide," page 357, where I fully explain its excellence as a honey-plant. It is one of the mints, and so has excellent relatives in the horse-mint and white and ball sages. It belongs to the family Labiate, so named from the two-lipped or bi-labiate form of the flowers. Such irregular flowers have developed, as we are assured, that bees, etc., might the better cross-pollinate the flowers. Other families with irregular flowers are familiar in the Scrophulariaceae and the Legumes. In the first is the excellent honey-plant—figwort—and in the latter all the clovers. The irregular flowers are so formed that the bee, as it reaches in to get the nectar, is sure to become dusted with the pollen, which, as the bee flies away, will be borne to the stigma of the next flower visited. The very fact of irregular flowers tells that we have honey-plants.

CORRECT USE OF NAMES.

I doubt if we can be too careful in using names correctly. I have a theory that to use terms loosely tends to beget untruth, and, conversely, to use words precisely works to make one more truthful. This, and to be more correct in our language, is surely enough to influence us all. Thus I would urge all to help to correct some very common faults of expression. I say faults, though the dictionaries may permit some of them. Our dictionary makers are conservative, and follow rather than lead in nice distinctions. The best way to gain the latest and best is to study the works of specialists. They must be accurate and precise.

The entomologist would never call a larva a worm. Insects are a branch separate from worms, and are very different in every way. A worm—an angle-worm is an example—is always the same in form and appearance. Thus a worm just hatched from the egg is like the mature worm, except it is small. Worms have no feet, nor any specialized organs for breathing. We may rightly say angle-worm, sea-worm, tape-worm, round-worm, etc.

The larva of insects are different. They are very unlike their matured selves—usually have feet—have respiratory organs. If these are to develop into butterflies or moths, we call them caterpillars. These always have from 10 to 16 legs, usually the latter number. If they are to develop into two-winged flies, like house-flies, we call them maggots. These are footless. If they are to become beetles, we call them grubs, when they usually have 6 legs, though some, like the grubs of weevils, are also apodous or footless. Another mistake is to call insects bugs. Only one order of insects are bugs. We may say chinch-bug correctly, but to call a beetle or locust a bug is as much an error as to call a rat a hippopotamus. Let us do all we can to secure more accuracy in the use of such names.

Los Angeles Co., Calif.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

(Continued from page 439.)

No. 9.—Practical Lessons for Beginners in Bee-Culture.

BY J. D. GEHRING.

I BELIEVE it is safe to assert, Mr. Bond, that in all the intelligent universe, so far as our knowledge extends, there is not a creature so low in the scale of intelligence that it does not in some degree appreciate human kindness, gentleness, sympathy—all expressed in the word *love*. Of course, it is easy to deny this statement; but it is by no means easy to prove it false, in theory and manifestation. Only a moment's reflection brings before your mind the fact that it requires but little effort on your part to make your horse, your dog, or even one of your hogs, love you—as far as an animal is capable of manifesting that quality of intelligence."

"But I came to the conclusion a few years ago that we have no safe guide by which to draw the line of limitation, in the scale of intelligence downward, beyond which we find no evidence to support my statement, when I read in a journal of science of a man in England who had trained quite a number of *fleas*!—to such an extent that he could hitch them to a cart purposely made for them, and to draw it, as horses do a wagon. And several other things he had taught those little creatures to do—all by the constant and persistent exercise of tact, patience and *kindness* toward them.

"I don't pretend to know how a flea can appreciate human kindness—I am only speaking of the fact as reported. I am convinced, however, mainly by personal observation since I began to handle bees, that in some mysterious way they can and do appreciate kind treatment. In the same way I have also learned that they have a keen appreciation or comprehension, of the other *kind* of treatment; and you know as well as I do how promptly and effectively they resent it.

"Looking at the matter, therefore, from the point of view here indicated, Mr. Bond, it is surely not a waste of time on my part to make the explanation of this principle a feature of our lesson.

"Several times, on various occasions, visiting friends have asked me, when they saw me at work among my bees, how I could do it all without getting stung to death. My answer nearly always is, *Because my bees know me*. They seem to know my touch. Possibly they also know my voice. Certainly they know me by their keen sense of smell.

"Mark that last statement well, Mr. Bond," I continued, looking sharply into his eyes through the meshes of his bee-veil as I spoke. "It is of greater importance than you may think; not because it is a controverted proposition among the most intelligent class of bee-keepers, but because as a positive statement between you and me, it implies that I mean it, that I believe it because I have been convinced of its correctness by evidence that satisfied my reason.

"Yes, Mr. Bond," I continued, impressively, "it is one of the articles of my bee-keeper's creed, that, *Bees have a keen sense of smell*, and I'm not ashamed of it—neither am I fanatical enough to be ready to fight for it. And—let me tell you this in strict confidence, Mr. Bond—whenever I hear of an intelligent, well-educated man who, as a professed bee-keeper, denies, point-blank and *on foot*, that article of my creed, I intuitively suspect him of all, or at least some, of such unprofessional habits as the smoking and chewing of tobacco, drinking of whiskey, and eating of garlic and limburger cheese.

"I know very well that it sounds like a silly paradox to make a statement of that sort," I hastily commented, when I saw through his veil a plainly outlined expression of ironical incredulity upon his otherwise jovial face. "Because, the thought naturally suggests itself that the best trained and most loving bees in the world would be sure to 'go for' such a man, hot-end foremost, if he ventured within bee-smelling distance. I say, the proposition naturally assumes a paradoxical look of that sort. But the paradox is at once seen to be a delusion, in a practical sense, when I explain that it is *because* of that fact of the bees refusing to own him as a friend, that a bee-keeper thus guilty of offending their olfactory nerves persists in denying that the sense of smell is an inherent part of bee-nature. *They do go for him*.

"I fear I have wasted time in an effort to make you see the point of my argument, which I can so plainly see and feel. But, nevertheless, I trust that my effort to handle a

delicate subject through the texture of the proverbial 'kid gloves' is not wholly lost."

This conciliatory comment was offered because I knew that my friend and pupil was guilty of the tobacco habit; though not of the other two.

"Beg your pardon for this digression, Mr. Bond, and for keeping you waiting to proceed with the drone-lesson. If you'll now examine the smoker to see that it is in working order, we will finish taking off that super. Of course, you remember my caution not to lift before you are sure you have a secure hold at both ends, and to be careful not to crush any bees when you set the super down."

Following my directions, Mr. Bond lifted one end of the super high enough above the frames so that he could blow a little smoke underneath it among the bees, to prevent them from making a demonstration when the super was finally lifted clear of the hive.

"This as a precaution," I explained. "It is better to do that, though it's a little more trouble because you must handle the smoker and one end of the super at the same time. You see, if you lift the super suddenly, the bees underneath are startled, not knowing what is going to happen, and, as a rule, they make a rush. The result is that often, before you can properly take care of the heavy super—supposing it to be full of honey—and get back to the hive, thousands of the bees are flying just where you want to take your stand to do the work you came there to do. To say the least, it may cause some unnecessary annoyance to have it that way. But there are times and circumstances when something very much worse than annoyance may be the result. As, for instance: the entire colony may become alarmed and assume a belligerent attitude, especially when you are handling old bees, and at a time when there is only a light honey-flow. Or, the colonies nearest the hive you are working at may be aroused by the alarm-signal given by the flying bees. In that case they will first mingle with those in the air to investigate the cause of the commotion; but, almost invariably in such an instance, these neighbor-meddlers will next proceed to investigate the open hive, with the result, well-known to all practical bee-keepers, that you have a case of robbing on your hands when you were least expecting it.

"I am telling you all this at this time, Mr. Bond, in order that you may be on your guard for such emergencies whenever in the future you have a job like this to do. 'An ounce of prevention is worth a pound of cure,' applies here, Mr. Bond, in the sense that a little precaution, with a little smoke judiciously applied, will often prevent—well, it's hard telling what not. Every experienced bee-keeper will endorse that, I think.

"Now for the drones," I said, after Mr. Bond had deposited the super, without crushing bees or getting stings on his hands, and had returned to my side near the hive.

"Please take this prying instrument"—handing him my old chisel—"and show me how nicely, carefully and gently you can loosen the ends of those brood-frames with it without alarming the bees. They are all glued fast, more or less securely, hence you must avoid sudden snaps and jerks."

Mr. Bond took the chisel and bravely began the job. He was getting along very well until he reached the last frame. The bees had done a little more work on that, seemingly, than elsewhere, and as a consequence my friend had a little more trouble with it, and was obliged to use a little more force to loosen it. Quite suddenly—as such mishaps, especially in the apiary, always do happen—his chisel slipped and down went the frame with a bang. Before I had time to use the smoker, or he to realize what had happened, about a score of bees make a dive at his naked hands. Fortunately, I had told him the day before that when ever bees did that, to keep his hands perfectly still for a moment and not to jerk them back; for if he did that they would surely sting. This he now remembered and put into practice, with the result that, though most of the assaulting bees went through the manœuvre of stinging, not one of them made earnest of it.

"Good! good!" I shouted approvingly. "Now you are initiated, Mr. Bond. That kind of an experience is to a bee-keeper recruit what the first charge in the first battle is to an army recruit. I think you can stand fire now, Mr. Bond, when you and any man's bees get into a fracas.

"Go ahead now and lift those frames out for inspection. You can do it as well as I can. Begin with the one you have just loosened and hand it to me; I want to see whether there is any drone-brood on it or not."

(To be continued.)

* Biographical. *

MR. ROBERT WILKIN.

We present on the first page this week the latest picture of one of the leading pioneer bee-keepers of California—R. Wilkin. His son-in-law, Mr. J. F. McIntyre, has kindly sent us the following biographical sketch:

Robert Wilkin was born near Londonderry, Guernsey Co., Ohio, July 4, 1829, and died at Newhall, Calif., May 30, 1901. He leaves two daughters, Mrs. J. F. McIntyre and Mrs. J. M. Owens, and 8 grandchildren.

He was educated at Westminster College, New Wilmington, Pa. Soon after leaving college he married Eliza Williamson, who had attended the college at the same time. He had one daughter, Harriet, by this marriage, his wife dying when the child was 9 months old. About 4 years later he married Isabella Gordon, by whom he had one daughter, Mary. His second wife died in 1888.

Mr. Wilkin made a specialty of the bee-business for nearly 40 years; he left a journal of the business from 1862 to 1901, in which I find many interesting items. His first investment in this line was to buy the patent-right to make and sell the Langstroth hive in several counties in Ohio. This venture was not a financial success. The next venture was to buy up a lot of black bees, transfer and Italianize them, and commenced the business of selling Italian queens, and colonies, at Cadiz, Ohio.

I find among the first items that he paid L. L. Langstroth \$25 for an imported Italian queen, and sold 20 colonies of Italian bees at \$20 each. An item in November, 1871, says: "I have 300 nuclei, and have sold this year over 800 Italian queens at \$6 each. Nov. 5, 1872: I reared this season 2,000 queens; 400 of these were sold at \$250 per hundred, and the balance at \$5 to \$6 each; and bought of A. Grimm 72 colonies of pure Italian bees at \$11 each."

This was too good to last, for on May 15, 1873, he writes: "Of my 315 hives of bees in the fall, only 61 are alive now." "June 5, 1873, bought of Dr. J. J. Adair, 85 colonies of bees at \$6 each." He continued to lose his bees in winter and buy more in the spring to carry on queen-rearing, until the spring of 1874, when he moved all of his bees and family to Oskaloosa, Iowa, to try producing basswood honey. After two seasons of failure and loss of bees here he moved all of the bees he had left—240 colonies—and his family, to San Buenaventura, Calif., arriving Nov. 6, 1875.

In 1871 he wrote a book of 96 pages, entitled, "Hand-Book of Bee-Culture;" price, 25 cents. But he gave away more than he sold, to save himself the trouble of answering so many questions while selling queens. The book is now out of print.

After coming to California he turned his attention entirely to the production of extracted honey. California honey had not made its reputation at this time, and it was hard to dispose of large crops, and on Nov. 1, 1878, he left his bees in charge of E. Gallup, while he went to England to sell his crop of 45,000 pounds of extracted honey. Subsequently he made trips to Boston and Texas to sell honey. His largest crop was 100,000 pounds from 1,000 colonies in 3 apiaries in 1884. He retained his interest and enthusiasm in bees to the time of his death, and was actively engaged in hiving swarms when he was taken with cholera morbus, and after 12 days' sickness died on May 30, at the age of 71 years and 11 months.

Mr. Wilkin was president of the California State Bee-Keepers' Association during the last two years. His hobby was co-operation. He was always willing to lend a helping hand in a good cause, and served his country during the Civil War in the 42d Ohio Volunteer Infantry.

J. F. MCINTYRE.

One by one the bee-keeping pioneers are passing away. Soon there will be none left to give personal reminiscences of the days of Langstroth, and Quinby, and Wagner.

California has perhaps led in the line of extensive apiaries, Mr. J. S. Harbison (still living, we believe) leading at one time with his 6,000 colonies of bees—the largest bee-keeper in all the world. Next to him likely came Mr. Wilkin, at least in the size of his honey crops, as mentioned by Mr. McIntyre.

But what of the future of bee-keeping? Will there arise worthy successors of the noble ones who have lived, labored, and then passed on? Yes, we believe there will be. Already a new interest is being taken in bees and the production of honey in many localities. The bee-keepers of the present are taking advantage of the experiences of the past, and with the progress of the present will undoubtedly surpass even the wonderful results attained by those of the years gone by.

Our pursuit is an honorable one. Indeed, "Our toil doth sweeten others." And as the years come and go, "others" will include more and more of the sweet-loving public that now know not the taste of "nectar fit for the gods"—delicious honey.

Above all things let us strive to emulate the grand examples as shown by the lives of those who have been translated to that Heavenly sphere, such as Langstroth, Quinby, Cary, Wilkin, and many more that might be named did time and space permit.

* The Afterthought. *

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

LIVING ON HONEY ENTIRELY.

I wonder how nearly a man could come to living entirely on honey—a man not a laborer, but one whose work is mainly mental. In other words, I wonder how much of a lie that is on page 365 where it says Pythagoras lived only on honey. I have hung up in my den a funny picture entitled, "George Washington trying to tell a lie." May it not have been that this was the one he was trying to tell?

A QUEER KIND OF ORNAMENT.

We've seen many sorts of things to ornament apiaries, but never strings of decapitated human heads before. Ask Mr. Haun if his State has "done gone" and annexed itself to Borneo. Frontispiece No. 24.

COUNTING BEES BEFORE THEY'RE HATCHED.

My parents came to Ohio in 1843. Suppose I should reason on how many Hastys of the stock there ought to be here, instead of saying how many there are. When a chap starts in to count a colony of bees by saying: "The queen has laid so many eggs per day for so many days;" then's the time to hustle him toward the door—just a little, you know. Counting bees before they are hatched is not better mathematics than counting chickens before they are hatched, but decidedly the reverse. Amount of inside surface in the hive, and general number of bees to the square inch, will yield a better approximation than egg-counting can do. Yes, we'd like to know who's got the most numerous straight colony; and it's sadly awkward that weighing bees is so much trouble except at swarming-time. Page 371.

A HOMELESS QUEEN.

I would say to Mr. Crafton, page 381, that it isn't very common for queens to be "lighting down upon us at our work. As for one way it might have happened, perchance a colony had been superseding its queen, and as usual reared several of them. Two chanced to emerge about the same time. One was accepted; and the other (the bees not wishing to swarm) was driven out of the hive. Finding herself homeless she prospected the open hive you were at work at to see what it might offer in the way of a home.

BEES AND GROCERIES.

Dr. Mary McCoy writes up an exceptional location in an entertaining way on page 387. Abundant pasturage on two first-class honey-plants, and scarcely anything else. One could well afford to do some feeding in spring if tolerably sure of a midsummer and fall with fair honey-flow of white honey. It looks as if grocers as well as other men are reasoning creatures. Unusual quantities of bees *shipped with the fruit*, when a masked apiary close by begins to need shipping. In a small city, where the number of dealers having exposed

sweets is small, something is possible in the way of posting each one as to the habits of bees. Tell them sweets in a store will be as sacred as sweets in a home pantry if you "shoo" the first ones away and don't let them get begun. Tell them also that screening often is only needed for two or three days, until a mysterious change in weather conditions makes the flowers "give down"—after which the flowers have the preference.

QUEEN ACCEPTING THE COLONY.

I think Editor Pender is on the right track in jogging our minds concerning the fact that *the queen must accept the colony* as well as the colony accept the queen. Curiously hunger is the best peace-maker on her side, and the opposite of hunger a very necessary peace-maker on their side. Page 383.

PARTLY FILLED SECTIONS FOR BAIT.

Let's sing some more about taking partly filled sections, bees and all, to start laggards at storing honey. No experience myself (so I can sing more freely). I have wondered just a little if the wise old chaps who recommend this have figured high enough on the hinderment the good colony suffers. You see, if we let a good hand spend half his day making a tramp work, and said tramp does $\frac{1}{4}$ of a day's work, we have scored a loss of 25 percent. My practice is, and my advice is strongly in the same direction, to keep bees for comb honey that don't need any such fussing. Page 387.

HINTS ON SELLING EXTRACTED HONEY.

On page 388, G. H. Pond strikes the heart of an important matter when he deprecates too large sales at one time. A lot of old candied honey well punctured with dead flies and ants—well, if an adversary wanted to keep a honey-loving family from buying any honey 800 years he couldn't contrive any better way. "Got a great lot of it on hand and can't buy till we eat it up." And it looks so repulsive they never eat it up. His experience with grocers is also interesting. Told many of them just how to reliquify—they said they would—no one ever did. 'Spects that would be pretty much the same everywhere. So if a fatal drooping of sales is to be prevented at all, the man who furnishes the honey must see to it that it is kept in liquid condition.

* The Home Circle. *

Conducted by Prof. A. J. Cook, Claremont, Calif.

NATURE STUDY.

"Flower in the crannied wall,
I pluck you out of the cranny;
I hold you here in my hand,
Little flower; and if I could but understand
What you are, root and all, and all in all,
I would know what God and man is."

Those beautiful lines from the great author, Tennyson, are rich in suggestion, and show the heart of the great poet-laureate of England. It is beautiful for us all to know the flowers, to know the birds, to be intimate with butterfly, moth and beetle. These gems of God's handiwork are intrinsically beautiful. To be on speaking terms with them, to look deeply into their beauty and mysteries, day by day, is to enrich and refine the life. Peering into their wondrous secrets is ever full of sweetest and best entertainment, is ever startling us with surprises, is ever bringing us to know more of God's wondrous ways.

And how we constantly learn to see more and more as we study these wondrous fashionings right from God's own hands. Did the great poet overstate the truth when he said that to know the flower thoroughly was to know God and man? I am sure, to know the flower and insect will bring us as near God as will anything we may study, and will make us more alive with human sympathy. If, as we are often told, the country folk are more pure and true than others, may it not be that the influence of plant and flower has worked to sweeten and ennoble life?

New York, through a beautifully wholesome work of Cornell University, is bringing nature study into all the country schools, and so into all the homes. God be praised for this splendid undertaking. We may well bring it into all our home circles. Can we not get all our States to follow New York's most admirable example, and all have the leaflet, the lesson

helps, and every bid to foster this glorious nature study? Let us all urge it upon our colleges and legislatures. A little seed here will bear a most bountiful harvest.

In the meantime, let us all get the children to study flower, insect and bird. Let us with the children see just when the birds come back in spring; when and how they build their nests; how they move on the ground; how attentive and faithful the male is to his mate; how the color of the male compares in brightness with the female; which of these do the singing, and when they sing sweetest and best.

Again, let us note what insects seek and sip nectar; why wasps are about the sticky mud near well or hydrant; how the butterfly fixes her wings when she alights; whether moths do the same; why the leaves of our plants are ragged; and countless other things that will be so full of interest that we shall find our days too short, and will sing with new meaning Faber's beautiful hymn:

"There's a wideness in God's mercy,
Like the wideness of the sea."

THOROUGH WORK.

It was a great compliment that a young man received in my hearing from an older person, a day or two since: "I must have you at any price. You do your work so well." Do we as parents appreciate the meaning of these words—"good work?" I had a boy work for me for 3 years. He was a joy every day. He never slighted anything nor did he do one thing less perfectly because no eye was looking on. It was a great misfortune that I could not secure his help this year. He could do better elsewhere. He will constantly progress. Promotions will come thick and fast. People will fairly tumble over each other in their eagerness to secure his services. His life will be a happy one, because successful. He will always be wanted, as he will always have something most valuable to give. His work will always be speaking his praise.

Can we devote time more wisely than by use of both precept and example, to beget in our children the fixed and certain habit of doing everything well—the very best that they can? Can we use a better means than to be generous with approval? Mrs. Cook often asked me if I were not afraid of spoiling Mr. — by my words of approbation. I never saw any evil in dealing out such just praise in great, liberal, allopathic doses. In my observation, nagging, fault-finding, sarcastic jeers go very little towards making people better. I do have great faith in the use of timely and honest praise for work well done. True, we may overdo our praise of virtue, but I think we are oftentimes far too chary in awarding it.

I am sure that there are very few things that count so largely in making life a great success as the habit of doing all that comes to our hands in the very best possible way. Christ was perfection. He always did his best—and the best.

GRIT.

I have always admired the stanza from the Irishman who told how he secured so good a shillalah for use in his police duties:

"I take for stick the scraggedest,
The thorniest, knottiest, raggedest,
The thorniest, knottiest, snaggedest,
Be it buckthorn, be it oak;
I pluck the flowers so sweetly,
Leave knot and thorns so nately,
And for seven long days completely
It must soak, and soak, and soak."

There is a whole lot of philosophy in this. Our worst passions and most forbidding traits may become our ornaments if held in check and made to bless and not curse. We may well leave the knots "completely" if we will only use enough of the hard polishing to smooth them down. The great thing to remember, we must let the hard, forbidding sticks of character "soak, and soak, and soak."

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

The Premiums offered this week are well worth working for. Look at them.

To Our Shippers.

About May 1st last, we removed our business from the buildings 120-122 W. Broadway to larger and more commodious quarters at Nos. 265-267 Greenwich St., and 82, 84, 86 Murray St., and we duly sent to our friends in the trade a notice of our removal. Shortly after we vacated the premises (120-122 W. Broadway,) one Joseph M. McCaul, rented a portion of our old quarters, and hung out a sign, "Hildreth, McCaul Co., Jos. M. McCaul, Prop.," with other large signs to the effect that his business is "headquarters for honey, beeswax, maple sugar and maple syrup."

The mercantile agencies report that Jos. M. McCaul is the sole proprietor of the new business, and that he claims to have paid to one Henry P. Hildreth (who has no connection with our business,) a consideration for the use of his name.

We will not comment upon the act of leasing our old quarters and exposing thereon the sign, "Hildreth, McCaul Co.," further than to state that we have instructed our attorneys to apply for an injunction restraining the said McCaul from using the name of "Hildreth" in connection with his business in any manner whatsoever.

We value highly the good name and business we have established by many years of satisfactory dealing with our friends in the trade, and we therefore send this notice so that you may not possibly confound us in any manner with the so-called "Hildreth, McCaul Co."

Our firm name remains as heretofore, and all our business is carried on at our new quarters—

**Nos. 265-267 Greenwich Street,
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Respectfully yours,

HILDRETH & SEGELKEN.

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2-frame Nucleus with Untested Queen, \$2.00, purchaser paying express charges.

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DEAR SIR:—Bees arrived in good condition. Transferred them to hive and gave them honey. Have reinforced them with hatching brood. Are working when not too cold. Have right color, and are satisfactory. D. B. GIVLER.

I like your way of packing bees to express.
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Months.....	July and August.		
Number of Queens.....	1	6	12
GOLDEN QUEENS.			
Untested.....	\$.75	\$ 4.00	\$ 7.00
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Select Tested.....	2.00	9.00	16.00
Breeders.....	5.00		

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Untested.....	\$.75	\$ 4.00	\$ 7.00
Tested.....	1.25	6.50	10.00
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RED CLOVER QUEENS, the LONG-TONGUED ITALIANS, which left all RECORDS behind in GATHERING HONEY, \$1 each; 6 for \$5. SAFE ARRIVAL GUARANTEED.

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Good Honey-Flow.

Bees are doing well, and are in good condition. The honey-flow is good—never better. From June 5 to June 15 it was cold and windy. We have had no swarms to amount to anything. I have taken off nearly 3000 pounds of honey. G. W. VANGUNDY.

Uinta Co., Utah, July 7.

Short Crop of Honey.

The basswood honey-flow is over with us, and a very short crop. We are having a drouth in this part of the State, that is hurting everything. The pastures would burn.

W. J. PICKARD.

Richland Co., Wis., July 13.

Queen-Rearing.

The greatest trouble in queen-rearing is making up the nuclei to receive the cells. Many good colonies have to be divided in forming these nuclei, and there is always a loss to the apiarist. I have used the following plan for a good many years, with very little trouble:

I have two extracting supers on every brood-chamber, and after the honey season is over I take from the top super two combs, and put two brood-combs in place of them. The next day I give them a queen-cell, and raise the cover a little to make an entrance. As soon as the queen hatches the bees will gladly receive her. Mating soon takes place, and I have a laying queen in the super. As soon as the queen is taken out I destroy all queen-cells, and the work is done.

Year after year I have succeeded in rearing a number of queens in this way without any loss or hindrance in my apiary.

Jamaica.

JOSEPHUS SMALL.

Do Bees Select Their Future Home Before Swarming?

This subject is attracting some attention among the readers of the American Bee Journal, and I have been amused at the various views expressed by "Rip Van Winkle," on page 429.

I have been a bee-hunter ever since the '60's and have found hundreds of swarms under almost every conceivable condition, from a hole in the ground to a whole lot of other places, and my opinion is that it depends altogether upon circumstances.

If the parent colony happens to be located near, or within a mile or so of a timber lot, and if the bees have visited it for honey, and the trees are large, with suitable holes to make homes for bees, if you are in those woods during the swarming season you will see bees looking the trees over. These searcher bees are from a colony near by about ready to swarm, or they are from a swarm that has clustered near by that may have come many miles without discovering a home to suit them.

I have kept bees for many years, and have been situated near the timber and also on the prairies, and have studied their habits. On the prairie four miles from timber I have had swarms strike out, and they must have gone many miles before finding even a bush to settle on, and they were first swarms, too. They certainly had not selected a future home. When located near the timber I used to go into the woods in early swarming-time and see the searcher bees looking the trees over for a home, and would find them cleaning out a hollow tree, or sometimes two or three of them, and have sometimes followed them from the hive to the tree they were preparing two or three days before, and in these cases, of course, they had selected their future homes before swarming.

Again, I have followed a swarm seven miles

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Our stock is so carefully bred and selected, as to secure car-loads of honey. Locality free from foul brood and other bee-diseases. Prices: 1 untested Queen, \$1.00, 6 for \$5.00; 1 tested Queen, \$1.50, 6 for \$7.50; best imported Queens, \$6.00; fair imported, \$5.00.

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through the timber, where there were fine places for a home for it, and would at last find it in an inferior place not fit for bees to winter in. This swarm went about five miles before reaching the timber, and had clustered twice before selecting a home. But had the parent colony been situated near the timber the swarm probably would have selected its home before swarming.

So, I think, as I said in the beginning, that it depends altogether upon circumstances, whether they select their home before swarming or not; and I have come to this conclusion from an experience second to none west of the Mississippi River, on this particular subject. If Mr. "Rip Van Winkle" doubts my source of information I can refer him to any bee-keeper in this part of South Dakota.

J. M. HOBBS.

Yankton Co., S. Dak., July 8.

Sweet Clover—White-Eyed Drones.

A few months ago I had the pleasure of visiting a bee-keeping friend, one of the veterans in our State, whose painstaking and methodical thoroughness in all that pertains to the craft may well be an inspiration to those of more slipshod ways. He is modest and unassuming, and as ready to listen as to talk. He remarked that he had seen nothing from me in the bee-papers for a long time, and I had to own it as a fact that the little creatures keep me so busy that I have not much inclination to write. They are doing better than usual for the time of year, and I ascribe that largely to the yellow sweet clover that I am growing. I have a small field of it, and also have it scattered in nooks and corners. It blooms here early in June—just about a month ahead of the white variety, which I have had for years. It promises to be quite a boon to my locality, coming as it does when ordinarily there is little for the bees to gather from. I have had to feed bees in June more than once, but this year I must either divide colonies or take care of swarms.

I had been thinking that my enthusiasm was waning somewhat under the pressure of crowding duties, but it all comes back to me when I get after a swarm.

I have been puzzled lately over some drones that seem to be normal, except that they have white eyes. I don't remember noticing any of that kind before, and don't know what to think of them.

MRS. A. L. AMOS.

Custer Co., Nebr., June 27.

Second-Hand Cans, Etc.

FRIEND YORK—I notice on page 441 that "Afterthought" thinks it important to comment on an item contained in a private letter to you, which you thought proper to publish in May 16th issue. Now, there was no theory advanced respecting bee-keeping, nor anything else, but a simple statement of fact, and what point he seeks to make I am too dull of comprehension to discover. If he intends to cast discredit on the statement of fact, he simply advertises himself as anything but a gentleman.

It may be that the item "winged" him—as sportsmen would say—as he may be a dealer in SECOND-HAND CANS—old Standard Oil Co. cans—any old rusty can that he can palm off on honey-canners. When he talks about time or space to fill, and nothing with which to fill it, the idea may be aptly applied to the column over which he presides, in numberless instances which might be referred to.

For instance, take the item headed, "Mr. Doolittle and Our Country." The entire Bee Journal could be filled with arguments, facts and figures, to show the falsity, or fallacy, of the idea intended to be conveyed, if one can be gathered from what he says. If foreigners come over here and invest their money, somebody gets it; if they are successful, so much the better for every one concerned in the business, from the highest to the lowest laborer; if they finally sell out and take their money back to a foreign land, some one has made enough to buy them out, and has the business; if they invest in any of our bonds, their money goes into large business enterprises, like railroads, or manufacturing in-

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Sections, Shipping-Cases—Everything used by bee-keepers. Orders filled promptly. We have the best shipping facilities in the world. You will save money by sending for our Price-List. Address, Minn. Bee-Keepers' Supply Mfg. Co., Nicollet Island Power Bldg.,

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to fill orders promptly for Untested Queens reared from a breeder of the HUTCHINSON SUPERIOR STOCK, or a select GOLDEN breeder, and mated to Golden drones, at 75 cents each; \$4.00 for 6, or, \$7.50 per dozen.

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Catnip Seed Free!

We have a small quantity of Catnip Seed which we wish to offer our readers. Some consider catnip one of the greatest of honey-yielders. We will mail to one of our regular subscribers one ounce of the seed for sending us ONE NEW subscriber to the American Bee Journal for a year with \$1.00; or will mail to any one an ounce of the seed and the American Bee Journal one year—both for \$1.30; or will mail an ounce of the seed alone for 50 cents. As our stock of this seed is very small, better order soon.

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11A26t J. D. GIVENS, LISBON, TEX.
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The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only \$1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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dustries; if their bonds are finally paid with the accrued interest, it only shows success of great enterprises.

No one need worry, nor have any sleepless nights over our ability to stand all such drains upon our life-blood—the old "ox in the pasture" doesn't realize that it's even fly time. But why pursue the subject?

Again, referring to the "daughter thrown in," in the manner in which he does it. There are many wealthy Americans, as well as many who are not so wealthy, whose daughters, worthy of every mark of consideration and respect, exercise the right—as I presume "Afterthought" would claim for himself—to select a partner for life from among those they think proper, and many of them marry husbands of foreign birth.

But to return to the cans. Those cans were bought of George W. York & Co. How does "Afterthought" know, or what does he care, how many "dimes" were paid for, or lost on, them? Of what interest is it to him, or the public, whether much or little was lost on them, unless, as suggested, he may be in the SECOND-HAND business?

WM. M. WHITNEY.

Kankakee Co., Ill., July 15.

Good Season for Bees.

This has been a very good season here, and the bees are doing nicely.

J. WARREN SHERMAN.

Suffolk Co., N. Y., July 12.

Dry and Hot.

I have 45 colonies of bees, all in fine condition, although it is very dry and hot, the temperature being 104 degrees in the shade. Yet my bees are gathering some honey from sweet clover.

SAMUEL H. HITT.

Jo Daviess Co., Ill., July 16.

Selecting a Home Before Swarming.

Two years ago I had an empty hive under a shed not more than 10 feet from the working colonies. One day my wife said that she saw bees coming out of that hive, and wanted to know if I had put a swarm into it. I replied that I had not. That afternoon a swarm issued from one of the old colonies, and we put it into that hive. The next day a swarm came to us from the northeast, and settled on a small cherry-tree not more than 20 feet from where the empty hive had been. It looks very much as though that stray swarm had intended to take possession of that empty hive, but finding it gone they settled on the cherry-tree. (I got 'em.)

On June 15 I had two swarms go together, and in 17 days the brood-chamber was filled, and I took off 24 fine sections of clover honey.

YOUNG BEE-KEEPER.

Logan Co., Ill., July 8.

Heavy Losses—Ahead of Dr. Miller.

I find that some bee-keepers in this locality have had bad luck, having lost all they had. A great many colonies died in the fall, or soon after, as there was no honey around here at that time. I saved 10 out of 22, and this is the first time I ever lost any in wintering.

My bees are swarming more than I want them to this season. I have one colony that has not swarmed in five years, and they have always stored more than any other two, but they are very weak now, and I think the queen must be worn out.

I have worked with bees, off and on, ever since I was a boy, and I am now 78 years old, and never have to wear glasses. I can take dog and gun and hunt from morning till night, and am as good a shot as ever. My wife is 74, and quite strong. We have been married 56 years, and have had 15 children. I think that beats Dr. Miller's 70 years.

I keep bees because I like them. Sometimes they are somewhat ugly, but if you were to sting me it would not hurt.

HENRY WHITE.

Humboldt Co. Iowa, July 1.

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BY RETURN MAIL.

For sending us **One New Subscriber** for one year, to the American Bee Journal, with \$1.00, we will send, by **return mail**, a fine **Untested Italian Queen** free as a premium. This offer



is made **only to our present regular subscribers.**

We will mail one of the above queens alone for 75 cents; or 3 for \$2.10.

Please do not conflict the above offer with the one on another page which refers to Red Clover Queens. For sending us **two** new subscribers, and \$2.00, we will mail free as a premium an **Untested Red Clover Italian Queen.**

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An Overgrown Putty-Knife.

This is a tool used with great satisfaction by S. E. Miller in the apiary. He tells of it in the Progressive Bee-Keeper:

Made of about one-sixteenth inch steel, $2\frac{1}{2}$ inches broad at the sharp end, tapering to about $1\frac{1}{4}$ inches 6 inches from end or where the handle commences. The handle is made of two half-round pieces of wood riveted on each side, the same as handles are put on butcher-knives or table-knives. It is ground alike on both sides, so that it does not matter which side is up when I go to use it.

When I get this blade between two bodies, or a body and cover, and begin to pry, it has to come, no matter how much propolis. The tool being large and strong (nearly a foot long) gives a great leverage, and no great effort is required in using it. I can take it slow and steady and bring two bodies apart without a snap. It will take the burr-comb from two top-bars at once. It is handy to clean bottom-boards, queen-excluders, and, in fact, almost anything where scraping is needed. I frequently use it to dig with when leveling up hives.

Improving Our Stock.

Here are some words well spoken by "The Worker," in the Australian Review:

Were I forming rules for judging Italian bees, I would place the points about like this: Honey-gathering, 80; prolificness, 10; gentleness, 5; color, 5; total, 100. It is so much easier to breed for color than for honey-production, that it will be some time before all of the bee-keepers in our land get into line. Some will say, "Oh, the Italian bees are good enough as they are, so long as we keep them of the three-banded strain." Others will say, "We want our bees to look beautiful; they will get the honey if there is any in the flowers." This is a mistake a great many make. I have had a lot of people say to me:

"What is the use of all your fussing, and breeding this and that? If there is no honey in the flowers the bees can't get it, no matter where they are."

I admit that, but when there is honey in the flowers the good strains will gather much more than the poor ones will. It is not so noticeable in a good season as a rather poor one. Before I commenced breeding for honey-gathering my colonies would vary much in the quantity of honey stored. I remember one year one colony gave me over 100 pounds of honey, while others only gave 30 pounds, and the average of the whole yard was under 20 pounds per colony. How I wish I had that queen now.

By careful breeding I now have my bees as nearly alike as regards honey-gathering as one could desire. Last year there was scarcely a pound of difference in the whole yard, and it was only a fair season for honey. Brethren, let us be ever on the watch for the queen whose bees excel in storing honey, and then breed from her, thus ever improving our stock.

Stimulative Feeding in Spring.

This has sometimes been spoken of as a two-edged sword, cutting both ways. Practiced at a time when bees are tempted to fly out in bad weather only to be lost, it may tend to diminish rather than increase the number of bees in the hive. G. M. Doolittle gives in the Progressive Bee-Keeper another phase of the matter, as follows:

During all the past we have heard much of stimulative feeding, with no hints that such might be a failure at certain times, but from past experiments and experience, I find there are times when feeding, or other stimulative



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This pen consists of a **hard rubber** holder, tapering to a **round point**, and writes as smoothly as a lead-pencil. The **point and needle** of the pen are made of **platina**, alloyed with **iridium**—substances of great durability which are not affected by the action of any kind of ink.

They hold sufficient ink to write 10,000 words, and **do not leak or blot.**

As they make a line of **uniform width** at all times they are **unequaled for ruling purposes.**

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Tennessee Queens!

Fine lot of Choice Tested Queens reared last season, daughters of select imported and select golden queens, reared 3 1/4 miles apart, and mated to select drones, \$1.50 each; untested warranted Queens, from same breeders, either strain, 75c each. No bees owned nearer than 2 1/2 miles. None impure within 3, and but few within 5 miles. 28 years' experience. Discount on large orders. Contracts

with dealers a specialty. **JOHN M. DAVIS,**
6A26t Spring Hill, Tenn.
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Standard Bred Queens.

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Not a Hybrid Among Them.

IMPROVED STRAIN GOLDEN ITALIANS.

World-wide reputation. 75 cts. each; 6 for \$4.00.

Long-Tongued 3-Banded Italians

bred from stock whose tongues measured 25-100 inch. These are the red clover hustlers of America.

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8A26t

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ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with \$2); or, one Tested Queen free as a premium for sending us FOUR new subscribers with \$4.00).

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

All queens guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, \$1.00 each; Tested, \$2.00 each. Send all orders to

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144 & 146 Erie St., CHICAGO, ILL.



Please Mention the Bee Journal when writing Advertisers *****

work, brings no adequate returns. The queen lays only as she is fed stimulative food by the workers, and the workers will feed her only this stimulative food when there is some reasonable prospect for a successful outcome. And while feeding will bridge over three or four days of bad weather, or even a week, yet there comes a time when they seem to lose hope and settle down on the firm determination that they will make no further efforts at "expansion" till they see some sign that there is to be propitious weather in the future. And during such long-continued, cold, wet spells as the present, I have found that the colony which was fed every day had very little, if any, more eggs or larvae in the hive at the end of two weeks than did the one having a reasonable allowance of stores, which had not been fed at all. But when we have fairly comfortable weather, but a dearth of nectar from no flowers being in bloom, or those in bloom not yielding any nectar, then good results can be obtained in feeding, or other ways of stimulating.

Close Imitation of Natural Swarming.

This is given as follows by G. M. Doolittle, in Gleanings in Bee-Culture, in a conversation with a neighbor, the first question being asked by Mr. Doolittle:

"Have you any queen-cells on hand?"

"I suppose there are plenty in any of those hives which have swarmed during the last week."

"You will see why I asked about the queen-cells before we get through. Now, to the plan: Take a box holding from three pecks to a bushel, and place it on a wide board a few feet from the hive you wish to make the swarm from, raising the front edge on a little block, enough so the bees can run under. Now open the hive you wish to make the swarm from, and find the queen, caging her on one of the combs, when all the frames are put back in the hive again. If you do not see plenty of unsealed honey, uncap some along the top-bars of the frames and close the hive. Now blow in quite a little smoke at the entrance of the hive, and rap on the sides of it as you would in driving bees, rapping at intervals, and leaving the entrance open so that the bees returning from the fields may enter the hive. In from five to eight minutes open the hive and take out the frames and shake the bees in front of the box, and thus continue till you get at least three-fourths of the bees in the box. When you come to the frame which has the queen on it, place her at the entrance of the box, and let her run in with the bees. When you get the desired amount of bees in the box, put the frames back in the hive and close it."

"Why do you run the bees into such a box instead of into a hive all prepared for them?"

"If you will not be impatient I will tell you so you will see the reason. Now, we will suppose that you have three-fourths of the bees and the queen in your box. You are next to take the box of bees to the shade of some tree and lean the box against the tree in an inclined position, with the open side of the box outward, leaving it there three-quarters of an hour, at which time you will find them clustered in the upper part of the box as they would be on the limb of a tree, if they had swarmed naturally. During the three-quarters of an hour, if you have more to make, keep on making from other hives in the same way. At the end of the time, hive the bees that are in the box, the same as you would hive any natural swarm. Put the hive on the stand you wish them to occupy, and see that all of them go into the hive, and they will stay and work the same as a natural swarm would."

"Then this leaving them the three-quarters of an hour with the open side of the box out is to make them think they have left home, so they will mark their location as does a swarm?"

"Exactly."

"I see now why mine would not stay when I shook them into a hive. But what about what is left in the old hive?"

"The next day, after making such a swarm, give the old colony a queen-cell from one of

the hives you say have such, giving cells from the colonies which have those the nearest ripe, and the work is done. If you have stopped to think as we went along you will see that you have bees of all ages in your "made swarm," just as there would be in a natural swarm, and that each bee has its sac full of honey the same as they do when they come out themselves, the drumming causing them to fill themselves full more completely than they do when swarming. By being left three-quarters of an hour to cluster in the box they mark their location anew, the same as a natural swarm, as you expressed a few moments ago."

"But is the old colony in as good condition as if it had swarmed naturally?"

"I think so, fully, and more so; for in natural swarming the first young queen does not emerge from her cell in less than seven days, unless the swarm has been kept back by bad weather; while with our made swarm, and a ripe cell being given, they will have a queen in two days from the time of making. If preferred, and you have them, a laying queen can be given to the old colony."

"Why would not this be a good plan to work an out-apiary, where there is no one to take care of swarms when they issue?"

"It would. And it is equally adapted for those who can not be at home between the hours of 8 a.m. and 4 p.m. to care for their bees when swarming naturally."

—THE— Bee-Keeper's Guide

Or, Manual of the Apiary,

—BY—
PROF. A. J. COOK.

460 Pages—16th (1899) Edition—18th Thousand—\$1.25 postpaid.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without THE BEE-KEEPERS' GUIDE.

This 16th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to GIVE AWAY to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

Given for TWO New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two NEW subscribers—simply the Bee Journal for one year:

Send us TWO NEW SUBSCRIBERS to the Bee Journal (with \$2.00), and we will mail you a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for \$1.25, or we club it with the Bee Journal for a year—both for only \$1.75. But surely anybody can get only TWO NEW SUBSCRIBERS to the Bee Journal for a year, and thus get the book as a premium. Let every body try for it. Will YOU have one?

GEORGE W. YORK & CO.,

144 & 146 Erie Street, CHICAGO, ILL.

Wanted

A position as assistant in an apiary; boy 17, strong, and with some experience. Address, ALBERT RICHTER, 157 Rhine Street, CHICAGO, ILL.

BEE-BOOKS

SENT POSTPAID BY

George W. York & Co.

Chicago.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages, beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, in cloth, 75 cents; in paper, 50 cents.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, \$1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, \$1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, \$1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopedia of 400 pages, describing everything pertaining to the care of the honey-bees. Contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, \$1.20.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierson.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, \$1.00.

Blennen-Kultur, by Thos. G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Blennen- und Honiggewinnung, nach der neuesten Methode (German) by J. F. Eggers.—This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia.—A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, \$1.00; for 100 colonies, \$1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 20 cents.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about Poultry Business. 64 pages. Price, 20 cents.

1901—Bee-Keepers' Supplies!

We can furnish you with The A. I. Root Co's goods at wholesale or retail at their prices. We can save you freight, and ship promptly. Market price paid for beeswax. Send for our 1901 catalog. M. H. HUNT & SON, Bell Branch, Wayne Co., Mich.

Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, July 18.—Choice white comb honey is arriving rather more freely and brings 15c. There is no accumulation at this writing, as receipts sell within a week after arriving, some of them on the same day. Amber grades bring about 12c. Extracted dull and slow of sale at anything over 5@5½c. Beeswax steady at 30c with good demand. R. A. BURNETT & Co.

CINCINNATI, May 17.—No demand for comb honey, also stock of it well exhausted. Extracted very dull; sales are more or less forced; lower prices from ¼ to 1 cent per pound. C. H. W. WEBER.

BOSTON, June 29.—There is practically no comb honey in our market, and owing to warm weather very little call for it. Are expecting some new comb early next month. Market for extracted dull, at 6½@7½c.

BLAKE, SCOTT & LEE.

OMAHA, May 1.—Comb honey, extra white, 24-frame cases, per case, \$3.40; No. 1, \$3.25; amber, \$3.00. PEYCKE BROS.

NEW YORK, July 8.—Our market is practically bare of comb honey, and demand good for white comb. Fancy stock sells readily at 15c; No. 1 white at from 13@14c, and amber at 11@12c. Extracted not in much demand, with plenty of supply; white, 6@6½c; light amber, 5½c; dark, 4½@5c. Beeswax firm at 29c.

HILDRETH & SEGELKEN.

ALBANY, N. Y., June 18.—Honey market is dull with no receipts or stocks and little demand. It is between seasons now. Prospect of good crop in this vicinity from what bees there are left, the greater portion having been killed by foul brood exterminators. H. R. WRIGHT.

DETROIT, July 18.—Fancy white, 15c; No. 1, 13@14c; no dark to quote. Extracted, white, 6@7c; dark and amber, 5@6c. Beeswax, 26c. M. H. HUNT & SON.

BUFFALO, July 10.—No demand for honey yet unless a very small amount of fancy white at perhaps 15@16c. Some old lots still about, unsalable, almost, at 6, 8 and 10 cents. Beeswax, 22@23c. BATTERSON & CO.

KANSAS CITY, June 14.—Very little old honey on our market but what is damaged by being granulated. Sales are light at 15 cents for best grade No. 1 Colorado. Amber, 13c. Beeswax firm at 25@30c.

W. R. CROMWELL PRODUCE CO.,
Successors to C. C. Clemons & Co.

SAN FRANCISCO, June 19.—White comb, 11½@12½ cents; amber, 9@10c; dark, 6@8 cents. Extracted, white, 5½@6½c; light amber, 4@4½c; amber, 3½@4c. Beeswax, 26@28c.

Market shows no quotable improvement, but there are no large quantities obtainable at the prices generally named by dealers. In a small way, for especially desirable quantities, slightly higher prices than are quoted are being realized.

Wanted

Fancy White Comb Honey in no-drip cases; also Extracted Honey. State price, delivered. We pay spot cash. FRED W. MUTH & Co., Front & Walnut Sts., Cincinnati, Ohio. Reference—German National Bank, Cincinnati. 28A17t Please mention the Bee Journal.

BEESWAX

We will pay 26c. cash, per lb. for pure, bright yellow beeswax, and 20c. cash, per lb. for pure, dark beeswax delivered here. CHAMBERLAIN MEDICINE CO., Des Moines, Iowa. 27A13t Please mention the Bee Journal.

Wanted.

Comb and Extracted Honey. Will buy your honey no matter what quantity. Mail sample of extracted, state quality of comb honey and price expected delivered in Cincinnati. I pay promptly on receipt of goods. Refer you to Brighton German Bank, this city.

C. H. W. WEBER.

2146-2148 Central Ave., CINCINNATI, OHIO. 29Atf Please mention the Bee Journal.

We have a Large Stock on hand
and can ship promptly.

SEND US YOUR ORDERS FOR Hives, Extractors

OR ANYTHING YOU WANT IN THE
BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address,

THE W. T. FALGONER MFG. CO.,
JAMESTOWN, N. Y.

W. M. GERRISH, East Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

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River Forest Apiaries!

FILL ALL ORDERS

By Return Mail.

Italian Queens Warranted

Untested, 75 cts.; Tested, \$1.00; Select Tested, \$1.50. Half dozen or larger lots as may be agreed on. Address,

RIVER FOREST APIARIES,
RIVER FOREST, Oak Park Post-Office,
30 Atf Cook Co., ILL.

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SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)....	.70	\$1.20	\$2.75	\$5.00
Sweet Clover (yellow)....	1.00	1.80	4.25	8.00
Alsike Clover90	1.70	3.75	7.00
White Clover	1.00	1.90	4.50	8.50
Alfalfa Clover80	1.40	3.25	6.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage. If wanted by freight, or 10 cents per pound if wanted by mail.

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I ARISE



To say to the readers of
the BEE JOURNAL that

DOOLITTLE...

has concluded to sell
QUEENS in their season
during 1901, at the fol-
lowing prices:

1 Untested Queen ..	\$1.00
3 Untested Queens..	2.25
1 Tested Queen	1.25
3 Tested Queens....	3.00
1 select tested queen	1.50
3 " " Queens	4.00
Select Tested Queen,	
last year's rearing	2.50
Extra selected breed-	
ing, the very best...	5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

G. M. DOOLITTLE,

11A26t Borodino, Onondaga Co., N. Y.
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24th Year Dadant's Foundation. 24th Year

**We guarantee
satisfaction.** **

What more can anybody do? BEAUTY,
PURITY, FIRMNESS, No SAGGING, No
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PATENT WEED-PROCESS SHEETING.

**Why does it sell
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Because it has always given better satis-
faction than any other.
Because in 23 years there have not been any
complaints, but thousands of compli-
ments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs
for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, \$1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

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Red Clover Queens

We have been telling you through our advertisements of the superior stock of queens we are furnishing this year, and we have abundant testimony from others corroborating our opinion. Look at the following which is only one of the numerous endorsements received.

July 5, 1901.

The bees are working as I never saw them work before, and already there is over 100 pounds of honey in the hive, and all from clover. I am led to believe that long tongues and good working qualities go together.

Yours very truly, OREL L. HERSHISER,
Supt. N. Y. State Apiarian Exhibit, Agricultural Building,
Pan-American Exposition, Buffalo, N. Y.

This refers to a colony of bees on the Pan-American grounds with one of our Tested Red Clover Queens reared last season.

Our Prices are as follows:

Gleanings in Bee-Culture one year and one Untested Red Clover Queen, \$2.00.

Gleanings in Bee-Culture one year with Tested Red Clover Queen, \$4.00.

Gleanings in Bee-Culture one year with Select Tested Red Clover Queen, \$6.00.

If you want something good you can not do better than to order one of these queens. All orders are filled promptly. No extra postage on these offers to foreign countries.

THE A. I. ROOT CO., Medina, Ohio.
(U. S. A.)

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are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO.
Send to them for their free Catalog.